

REMARKS/ARGUMENTS

Claims 1-16, and 19 remain pending in the application and were rejected by the Examiner. Applicant, by this paper, cancels claims 17-18 and requests reconsideration and allowance of all pending claims.

Discussion of Rejections Under 35 U.S.C. §112

Claims 17 and 19 were rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement. Applicant cancels claims 17 and 18 without prejudice. Although Applicant believes that there is sufficient written description for these claims in the Specification, as filed, Applicant cancels claims 17-18 in order to further prosecution of the application to allowance.

The Examiner contends that there is no written support for the feature of claim 19 reading “GPS/wireless terminal unit having an uncertainty area with a center distinct from the base station geographic location.” Applicant respectfully traverses the rejection.

The Specification, at paragraph [0065] refers to Figure 7 that shows “a spatial view of the general case where the uncertainty region is *not centered* about the base station 8.” (*emphasis added*). Additionally, in the same paragraph, the Specification refers to “the terminal unit uncertainty region A, 68 or 70.” A review of Figure 7 shows that the uncertainty region 70 is completely distinct from the base station geographic location. Additionally, review of Applicant’s Figure 9 illustrates that the uncertainty region in which the terminal 2 lies, has a center which is distinct from the base station geographic location.

Thus, Applicant respectfully requests reconsideration and withdrawal of the rejection of claim 19.

Discussion of Rejections Under 35 U.S.C. §103

Claims 1-16 were rejected under 35 U.S.C. §103(a) as allegedly unpatentable over U.S. Patent No. 6,188,351 to Bloebaum (hereinafter Bloebaum) in view of U.S. Patent No. 6,271,788 to Longaker et al. (hereinafter Longaker), further in view of U.S. Patent No. 6,636,744 to Da (hereinafter Da). Claims 17-19 were rejected under 35 U.S.C. §103(a) as allegedly unpatentable over Bloebaum in view of Da.

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be reasonable expectation of success. Finally, the prior art reference, or references when combined, must teach or suggest all of the claim limitations. Applicant respectfully traverses the rejections and requests reconsideration and allowance of the claims.

Claim 1 recites “[a] system for transmitting a GPS receiver code-phase search range to a integrated GPS/wireless terminal unit.” The system a includes “a controller operable to calculate a GPS code-phase search range with reference to a base station geographic location, the wireless coverage area, *an angle between a vector extending from the base station to a GPS satellite and a vector extending from the base station to the GPS/wireless terminal unit...*” The cited references fail to teach or suggest at least this claimed feature, whether alone or in combination.

The Examiner concedes that Bloebaum fails to describe the claimed feature and does not contend that Longaker teaches or describes the claimed feature. *See, Office Action*, dated September 12, 2006, at page 4 (“Bloebaum does not teach the newly added: an angle between a vector extending from the base station to a GPS satellite and a vector extending from the base station to the GPS/wireless terminal unit.”).

The Examiner alleges that the claimed feature is taught in Da, and argues that “the elevation angle α is an angle between a vector extending from the base station to a GPS satellite, and an azimuth angle Φ corresponding to satellite 12-J and WGP 24 is a vector extending from the base station to the GPS/wireless terminal unit.” *Id., citing Da, Fig. 4-5 and Col. 3, line 36-Col. 4, line 9.*

However, Da explicitly states that the angle α corresponds to the elevation angle of the satellite. Da explicitly states: “the elevation angle α_j is defined as the angle between the line of sight from WGP server 24 or client 24 to a satellite 12-j and a projection of the line of sight on the horizontal plane.” *Da, at Col. 3, ll. 43-46.* Da further states: “the azimuth angle Φ_j is defined as the angle between the projection of the line of sight on the horizontal plane and a projection of the north direction on the horizontal plane.” *Id., at ll. 46-49.*

The elevation angle and azimuth angle described in Da relate a satellite position relative to a single point on an imaginary horizontal plane. The elevation angle is relative to a projection of the satellite onto the horizontal plane. Thus, the angle in Da does not span two objects on the earth, and does not teach nor suggest “*an angle between a vector extending from the base station to a GPS satellite and a vector extending from the base station to the GPS/wireless terminal unit*” as claimed.

Furthermore, the azimuth angle described in Da spans two imaginary projections. The first is a “projection of the line of sight on the horizontal plane” and the second is “a projection of the north direction on the horizontal plane.” *See, Da*, at Col. 3, ll. 46-49. Neither projection spans two physical objects.

Moreover, Da fails to describe either angle in relation to a base station. Da identifies a base station using reference number 23. Neither the elevation angle nor the azimuth angle is described as related to a base station. Da provides no teaching nor suggestion of relating any angle to a base station.

Therefore, the cited references, whether alone or in combination, fail to teach every claimed limitation. The Examiner concedes that Bloebaum and Longaker fail to teach or suggest the claimed feature, and Applicant demonstrates that Da also fails to teach or suggest the claimed feature. Thus, the combination of references fails to teach a feature that is not individually taught nor suggested by any cited reference. Applicant respectfully requests reconsideration and allowance of claim 1.

Claim 9 includes a feature similar to that discussed above in relation to claim 1, and is believed to be allowable at least for the reasons presented above in relation to claim 1. Applicant respectfully requests reconsideration and allowance of claim 9.

Claim 3 includes “a controller operable to calculate a GPS code-phase search range with reference to a base station geographic location, a radius of the wireless coverage area served by the base station, an elevation angle of a GPS satellite, and said time reference.” This feature is neither taught nor suggested by the cited references, whether alone or in combination.

As previously discussed in Applicant’s response dated January 30, 2006, Bloebaum and Longaker, alone or in combination, fail to teach or suggest at least this feature of claim 3.

The Examiner provides no citation to a portion of Da that teaches or suggests the claimed feature. Indeed, Da fails to even relate the radius of the wireless coverage area to a code phase search range, much less a code phase search range for a GPS signal. As such, Da cannot be the basis for teaching or suggesting the use of a radius of a base station coverage area in combination with a satellite elevation angle to determine a GPS code space search range. Thus, Bloebaum, Longaker, and Da whether alone or in combination, fail to teach or suggest all claimed limitations. Applicant respectfully requests reconsideration and allowance of claim 3.

Claim 11 includes features similar to those discussed above in relation to claim 3 and is believed to be allowable at least for the reason presented above in relation to claim 3. Applicant respectfully requests reconsideration and allowance of claim 11.

Claim 6 recites a system for transmitting a GPS receiver code-phase search range that includes “a controller operable to calculate a GPS code-phase search range with reference to a variance of a positioning error of said location reference, and said time reference.” As featured in the claim, the code-phase search range is determined, in part, based on a location reference for the GPS/wireless terminal unit, and a variance of the positioning error of the location reference. This feature is discussed in Applicant’s specification, generally, at page 21, paragraph [0073], with the location reference described as an estimate of the user position.

The Examiner concedes that Bloebaum and Longaker, whether alone or in combination, fail to teach or suggest this claimed feature. The Examiner cites to Da, at Col. 3, line 52 through Col. 5, line 20. Applicant respectfully requests the Examiner a more exact citation to the portion that is relied upon by the Examiner.

Applicant believes that Da fails to describe any variance of a positioning error. Indeed, Da fails to even use the term “variance” anywhere in the document. Da cannot be the basis of a teaching or suggestion to incorporate a “a variance of a positioning error” where Da is completely silent as to any variance. Thus, Applicant respectfully requests reconsideration and allowance of claim 6.

Claim 14 includes features similar to those discussed above in relation to claim 6 and is believed to be allowable at least for the reason presented above in relation to claim 6. Applicant respectfully requests reconsideration and allowance of claim 14.

Claim 19 includes the feature of “a controller operable to calculate the GPS code-phase search range with reference to a base station geographic location, a position estimate of the integrated *GPS/wireless terminal unit having an uncertainty area with a center distinct from the base station geographic location*, and said GPS time reference.” (*emphasis added*).

As discussed in the response, dated January 30, 2006, Bloebaum describes using a timing advance (TA) to define “a finite width ring 30 around the BTS 20, with *the width of the ring 30 dependent on the resolution of the TA parameter*.” Bloebaum, at Col. 11, ll. 12-14 (*emphasis added*). Thus, the width of the ring depends on the resolution of the TA and defines an uncertainty range. The uncertainty range defined by the width of the ring is *centered at the base station geographic location*. This is in direct contrast to that claimed in claim 19. Thus, Applicant respectfully requests reconsideration and allowance of claim 19.

Discussion Dependent Claims

Claims 2, 4-5, 7-8, 10, 12-13, and 15-16 depend from one of claims 1, 3, 6, 9, 11, and 14, and are believed to be allowable at least for the reason that they depend from an allowable base claim. Applicant respectfully requests reconsideration and allowance of claims 2, 4-5, 7-8, 10, 12-13, and 15-16.

CONCLUSION

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 858-651-8546.

Respectfully submitted,

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